ORANGE COUNTY WATER DISTRICT
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ORANGE COUNTY WATER DISTRICT
ORANGE COUNTY'S GROUNDWATER AUTHORITY

August 21, 2012

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Re: Draft General NPDES Permit – Aquatic Weed Control

Dear Chairman and Members:

The Orange County Water District (OCWD) is an agency formed by the State of California in 1933 to protect and manage the Orange County groundwater basin. OCWD is responsible for managing and maintaining the Orange County groundwater basin. The District's service area covers more than 350 square miles in northern Orange County and provides a water supply to 23 cites and water agencies. Over 2.2 million residents rely on groundwater for approximately 65-75% of their water needs. Imported treated surface water from northern California and the Colorado River supplies the remainder. One of the District's primary responsibilities and mission is to replenish the groundwater reserves through an extensive surface water recharge program and to maintain a wetlands treatment area for water quality improvement. Groundwater recharge activities and maintaining the wetlands area may include periodic spraying of selected surface water areas for aquatic weed control or possibly aerial spraying in the wetlands. These activities will require reporting and compliance with the proposed general aquatic weed control permit.

We appreciate this opportunity to discuss the proposed statewide general National Pollutant Discharge Elimination System (NPDES) permit for discharge of aquatic algaecides and herbicides to surface waters of the United States (General Permit), the potential impact of the monitoring requirements, and to comment on the technical issues proposed in the draft general permit. Following are comments for your consideration in adopting the final permit.

OCWD Forebay Groundwater Recharge Facilities

The groundwater in northern Orange County is replenished by a recharge system owned and operated by OCWD. As shown in the attached figure, the primary spreading basins are located along the northern curve of the Santa Ana River in

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Anaheim. Improvements to the river to widen and deepen the river channels and off-river basins, as well as constructing spreading basins, began in the early 1950's and continues today.

Most of the spreading basins are located adjacent to the river in the Orange County Forebay. Along the six-mile section of the Santa Ana River, a system of diversion structures, off-river basins, and recharge facilities captures most of the water flowing in the river that otherwise may flow into the Pacific Ocean. A series of sand dikes in "T" and " L" configurations are maintained in the river channel to maximize wetted perimeter and allow for greater percolation. River flows are also diverted into an off-river channel system and piped to a series of deep spreading basins for groundwater recharge.

OCWD owns and maintains shallow and deep spreading basins in the Forebay that range in size up to 72 acres. One of the largest basins is Anaheim Lake with maximum storage capacity of 2,300 AF. The basins range in depth from approximately 5 to 50 ft. To maximize percolation rates, the basins are cleaned prior to the rainy season using bulldozers to scrape a thin layer of accumulated sediment off the bottom and sides of the basins. A series of pipelines connect the basins for transfer of river flows and/or imported water. Filling and draining of the basins is dependent on numerous factors including percolation rates, season, and purchase of imported water, when available. During basin cleaning, no water is discharged or released for waste to the ocean. The basins are operated to maximize groundwater recharge using both the river and the spreading basin facilities.

One of the primary source of water used to recharge the groundwater basin is the Santa Ana River. The Santa Ana River watershed is relatively small, covering an area of only 2,800 square miles. Headwaters of the Santa Ana River originate in the San Bernardino mountain and travels through San Bernardino, Riverside and Orange Counties as it to the ocean. Beneficial uses of the river include recreation, water supply, aquatic habitat, and groundwater recharge. Maintaining high quality water in the river is of great importance to OCWD since the Santa Ana River is one of the primary sources of recharge water for Orange County's groundwater basin.

The Santa Ana River (an ephemeral stream) is an effluent dominated river during dry weather flows, with tertiary treated effluent discharges from wastewater treatment facilities in San Bernardino and Riverside Counties accounting for the majority of the baseflow. During the summer months more than 90% of the flows in the Santa Ana River consist of municipal wastewater discharges. Treated wastewater is discharged directly into the Santa Ana River or into tributary streams and creeks, although a few of the smaller wastewater plants discharge into percolation ponds adjacent to Santa Ana River tributaries. All dischargers have National Pollutant Discharge Elimination System (NPDES) permits and must meet effluent quality requirements consistent with the RWQCB's water

quality objectives for the Santa Ana River, except for those with waivers obtained through the TIN/TDS studies or by participation in salt offset programs.

Waters of the United States

The general aquatic pesticide permit covers application of aquatic pesticides to waters of the United States and including the other listed water bodies (page A-5). We recommend that the RWQCB have the authority to evaluate site-specific applications to determine whether a body of water is considered "waters of the United States" in assessing if an entity must apply for the general aquatic pesticide permit and/or evaluate what bodies of water fall under the definition of "waters of the US" for purposes of compliance monitoring and best serves the objective of the aquatic pesticide general permit and ensures that resources are allocated to comply with the intent of the regulation.

As described above, the OCWD recharge facilities, ponds and off-river basins should not be considered "waters of the US" because:

- Recharge basins are routinely drained (to other basins or recharge areas) and dried for cleaning; many of the facilities are cleaned annually
- Water is diverted into these facilities for percolation and replenishment of the groundwater basin
- Water is not diverted to tributaries considered waters of the US; all water is captured and contained for percolation
- Water is moved from facility to facility for purposes to enhance percolation or to drain a basin for cleaning
- The Santa Ana River, south of Ball Road, is a dry streambed except during storm events; water is captured and retained by a series of "T" and "L" levees to increase percolation rates
- Aquatic pesticide application occurs during the spring and summer months, as needed on a site-specific basis; pesticide application does not occur during storm events or storm periods

Aquatic Pesticide Application Plan (APAP)

OCWD will be preparing and implementing an individual monitoring and reporting program due to the site specific recharge basins and responsibility to manage the Prado wetlands for improved water quality. OCWD has been an active enrollee in the state's general aquatic pesticide permit since 2001 and will continue to enroll for coverage under the new general permit. OCWD has developed their pesticide application plan with priority focus to use best management practices (BMPs) to avoid the need to apply aquatic pesticides; however on a few instances since 2001, use of an aquatic pesticide was needed due to the rapid and excessive growth at selected areas (e.g., pond or wetlands). All pre- and post-compliance monitoring activities were achieved; monitoring continued until attaining background levels prior to aquatic pesticide application. As noted, the

frequency to apply aquatic pesticides has been rare. Following are specific questions/comments on the APAP.

1. Listed aquatic pesticides: The general permit lists 8 chemicals with receiving water limitations and 2 chemicals with receiving water monitoring triggers. Are these 10 aquatic pesticides the only chemicals permitted for use under this general permit? May other aquatic pesticides be used and if yes, what is the approval process?

2. Public Notice Requirements (page 8): The Discharger must notify potentially affected governmental agencies every calendar year prior to the first application of the aquatic pesticide. The notice requires listing the general time period and locations of expected use. As noted above, OCWD has infrequently required the need to apply aquatic pesticides but has elected to be covered for those occasions that application may be needed. OCWD does not routinely (e.g., quarterly) apply aquatic pesticides. Applications may occur within a small confined recharge basin or the wetlands area located above Prado Dam. Within this context, the following questions arise:

    a. Confined recharge basins: As shown on the attachment, OCWD maintains many isolated recharge basins to spread and percolate water for groundwater recharge. Many of the basins (located north or east of the Santa Ana River) are isolated and do not have a "downstream" water body that may be affected by application of the aquatic pesticide. The off-river basins along the Santa Ana River are connected and not part of the main stream of the river. These off-river basins may terminate into a larger basin or be diverted to other recharge facilities. Water is percolated for recharge and in general, diverted water for spreading does not reach or mix with other water bodies. Are applications to these recharge basins require public notice as specified by the permit?

    b. Affected governmental agencies: The permit does not define who are affected governmental agencies for purposes of the pre-application notification.
        i. Confined recharge basins: Since aquatic pesticide treated water will remain in the confined basin and not released to downstream or adjacent entities, who would be the governmental agencies for notice? OCWD recommends that notice to governmental agencies not be required for enclosed (confined) recharged facilities.
        ii. For applications that may occur at the Wetlands, are the governmental agencies those located along the Santa Ana River downstream of the wetlands? Are governmental agencies the cities and county? Others?

c. Calendar year notice: The permit requires annual year notice, prior to the first application of aquatic pesticides to the potentially affected agencies. Since OCWD does not routinely apply algaecides or aquatic herbicides, we will not have defined dates or locations. Applications would be applied only as needed if other BMPs have not been successful. Since specific dates and locations (e.g., specific recharge facility or the wetlands) are unknown at the start of the year, how will notification be made to be accurate and in compliance with permit notification requirements? Similarly, the specific type of aquatic pesticide will not be known until the need arises for application of the algaecide. OCWD suggests that for entities covered by the general permit that do not have a routine schedule for aquatic pesticide application to include language that allows for 15-30 days pre-notice of planned application. Applications to confined (enclosed) recharge basins should not require calendar notice.

3. Submit APAP at least 90-days before expected permit coverage: OCWD recommends that the draft permit, like previous permits, provide for continuous coverage under the old permit until the Discharger is covered by the new permit. Continuous coverage is needed because the new permit has timelines that will leave the permittee without any coverage during the interim of receiving coverage. For example: (1) submit APAP 90-days before expected permit coverage, (2) 30-day public review of the APAP, and (3) time required for the SRWCB to complete their review process and issue the Notice of Applicability (NOA). OCWD recommends that the new permit allow for continued coverage during the transition period for the Discharger to obtain coverage under the new permit.

4. Monitoring locations and treatment area: For entities such as OCWD, identifying the specific monitoring location and treatment area with GPS coordinates (page C-4) will be very challenging as advance knowledge of "where" treatment to GPS coordinates will not be possible. Since OCWD will rarely have the need to apply aquatic pesticides, we must be covered by the general permit and have the ability to respond to unplanned environmental changes (excessive rapid growth or aquatic blooms) to a recharge basin or the wetlands area. In OCWD's APAP, GPS coordinates will be provided of each recharge basin and of the entire wetlands; however, identifying by GPS coordinates "where" application will take place is not realistic. OCWD may specify general locations within a recharge basin where specific water quality samples may be taken. The locations may be refined at the time of actual sampling.

5. Background monitoring: The monitoring and reporting program requires background monitoring to be collected upstream at the time of application

or up to 24-hours in advance of the application event (page C-4) and Table C-1 (page C-6). OCWD recommendeds that the time to collect background samples be increased up to 7-days prior to application. Many entities, like OCWD, have a separate Water Quality department or external contractor, who will be collecting water samples. If aquatic pesticide application is scheduled for a Monday, then Water Quality staff must either collect samples over a weekend or be scheduled to arrive early on the day of application. Often, aquatic application may be planned for a specific day but conditions may warrant revising a schedule to another day of the week or addressing equipment failures. Twenty-four hours in advance of application seems very stringent given that post monitoring activities will occur on the day and following application.

6. Water Quality Samples: Table C-1 (page C-6) specifies that grab samples for physical and chemical parameters be collected at the surface (footnote 4). It is recommended that measurements of field parameters and collection of water samples be below the surface of the water (e.g., 1-foot) and not at the surface of the water.

7. Legal Authorities – WDRs: The draft permit states that "this General Permit also serves as WDRs" (page D-10). Please clarify if this permit covers aquatic pesticide application to land adjacent to water bodies to control weeds where pesticide residual may enter the adjacent water body due to rising water levels.

Summary

The OCWD recharge facilities and off-river basins are constructed and operated for purposes to replenish the groundwater basin. Water is not discharge but piped to adjacent facilities to capture and percolate all water. As noted above, coverage by the general permit is needed should aquatic pesticide application be required at specific recharge locations/wetlands and for possible spot applications to selected sand banks and edges of recharge, impounded water. Periodically, the basins and other facilities are emptied and the bottom and sides scrapped to remove the clogging layer. Once cleaned, water is diverted back to the basins for percolation. Water is moved from basin to basin by means of bypass pipelines and water is not discharged or wasted. Similarly, water is diverted within the off-river system and main river by sand levees and T or L sand bars. The bottom is scrapped and cleaned to provide a new surface area for enhanced percolation.

In general, water flowing in the Main Santa Ana River downstream of Imperial Highway is divered or percolates leaving a dry riverbed from Ball Road and southward. As described above, water is transferred from one basin to another during cleaning and at no time is water discharged but captured for infiltration into the Orange County groundwater aquifer. To address these site-specific

projects, the SWQRC should provide the RWQCB with authority to evaluate each application that may warrant additional consideration and assessment prior to requiring filing and issuance of a general aquatic pesticide permit.

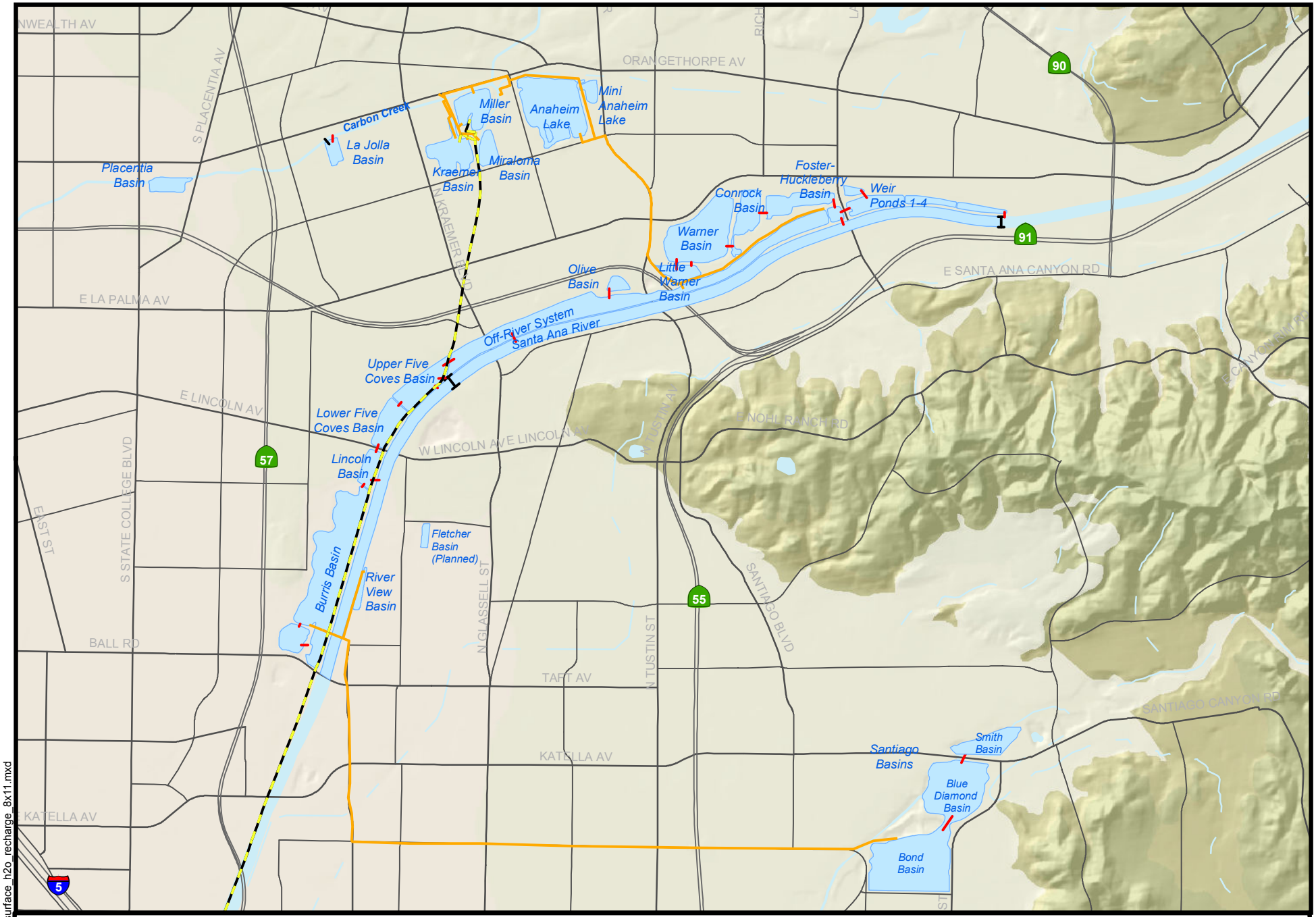
We appreciate the opportunity to review and comment on the draft general permit and hope you will consider our comments in developing a final general permit and/or developing guidelines on assessing who needs to apply for the permit.

If you have any questions, please call me at (714) 378-3281 or by email at nyamachika@ocwd.com.

Sincerely,

Nira Yamachika
Director of Water Quality
Orange County Water Distinct

Attachment: Forebay recharge facilities map


Carbon Creek
La Jolla Basin
Placentia Basin
Miller Basin
Anaheim Lake
Mini Anaheim Lake
Kraemer Basin
Miraloma Basin
Foster-Huckleberry Basin
Weir Ponds 1-4
Conrock Basin
Warner Basin
Little Warner Basin
Olive Basin
Off-River System
Santa Ana River
Upper Five Coves Basin
Lower Five Coves Basin
Lincoln Basin
Burris Basin
River View Basin
Fletcher Basin (Planned)
Santiago Basins
Smith Basin
Blue Diamond Basin
Bond Basin
ORANGETHORPE AV
E LA PALMA AV
E LINCOLN AV
W LINCOLN AV
E SANTA ANA CANYON RD
E NOHL RANCH RD
BALL RD
TAFT AV
KATELLA AV
SANTIAGO CANYON RD
S PLACENTIA AV
N KRAEMER BLVD
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Recharge Water Pipelines
Groundwater Replenishment System
Inflatable Rubber Dam
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